

Hirschfeld's Question to Materials Theory Session of Program Conference

- What are the prospects for direct Eliashberg-style 1st principles computation of pairing interaction in electronic pairing systems with weak-intermediate strength interactions?
- In the absence of such tools, how can theory guide the search for higher T_c ?
- In the cuprate and other strongly correlated materials, are there issues where traditional DFT calculations can contribute, where strong correlations play a less important role?
- What are the prospects of applying current methods to problems of inhomogeneous superconductivity in real materials: surfaces, grain boundaries and Josephson junctions ...?
- If you look into the future 5 years and assume continued improvements in computer speed and memory, what superconductivity problems could one tackle which are out of reach now?